Amendments to the Specification:

Please replace the paragraph beginning at page 1, line 27, and ending at page 2, line 20, with the following rewritten paragraph:

-- Currently, typical microscopic inspection systems utilize a single detector array to inspect semiconductor wafers. The detector arrays may contain a variety of sensor-element (pixel) densities. For example, detector arrays having a 2048x512 array of pixels are available. To inspect a wafer, a detector array is typically raster scanned over the patterned wafer's surface under high magnification. Unfortunately, scanning wafers line-by-line is time consuming, especially when the time required for changing the relative directions of the detector arrays over the wafer is taken into **account** ~~accounted~~. Typically, the wafer is attached to an x,y stage and driven under the microscope. During a swath across the wafer, the stage must accelerate to a constant speed, scan the swath of patterned surface to be inspected, decelerate to a stop, move up one field of view in the transverse direction, and accelerate to the constant velocity again for another swath. The overhead of non-swathing the patterned surface can be a significant fraction of the total wafer inspection time. For example, a magnification of 100x with a 20um sized pixel and 2048 detector elements would produce a scan width of 0.41mm and would require 732 swaths to cover a standard 300mm diameter semiconductor wafer. If overhead of each swath were 1 second, then the inspection time would be extended by over 12 minutes for each wafer. Therefore, microscopic inspection of wafers reduces the throughput of semiconductor manufacturing. One possible solution is to create larger sized detector arrays such that fewer scanning passes of the detector array over the wafer are required. Unfortunately, larger detector arrays with no defective pixels are very difficult to fabricate because yields are small with physically large devices. Another possible solution is to run the current detectors at higher speeds. However, it is difficult to obtain much improvement from the current state-of-the-art using this strategy because the detectors create a greater amount of noise at higher speeds, thereby diminishing the signal-to-noise ratio. This would also not help the scanning overhead time. –

Please replace the paragraph beginning at page 6, line 15, with the following rewritten paragraph:

-- In order to utilize more than one detector array in the present invention, the field of view of microscope inspection system 100 is large enough to encompass more than one detector

array 116. Some embodiments of inspection system 100 use lenses that create fields of view that can be up to approximately 3 mm in diameter at the object. Depending upon physical and cost limitations, even larger fields of view can be created. In the embodiment of FIG. 1, the large field of view over a broad spectral range is a result of using a catadioptric objective lens 106 in combination with a reimaging lens 108. As will be described later, various combinations of lenses can be used to obtain a large field of view required to implement the present invention. Zoom lens 110 is used to vary the magnification power of inspection system 100. As a note, the field of view for current semiconductor inspection systems ranges from **100-500μm** ~~100-500um~~, depending upon the magnification. --

Please replace the paragraph beginning at page 8, line 15, with the following rewritten paragraph:

-- The inspection system of the present invention operates effectively when the lenses are designed to have a high numerical aperture, a large magnification, and a large field of view. A large numerical **aperture** ~~apertures~~ is desirable because it provides the inspection system with high-resolution capabilities and hence more sensitivity. The inspection system of the present invention has a numerical aperture that depends on the detector pixel size, magnification, effective wavelength, and the detector pixel sampling of the optical resolution. Typically, a minimum of 2.5 detector pixels is needed to sample a resolution element. The resolution element is defined by the effective wavelength of the illumination divided by the numerical aperture. For example, if the magnification were 40X and the detector pixel element were 0.020mm, then, at the object, the detector element would be de-magnified to 0.0005mm, the resolution element would be 0.000125 (2.5 * 0.0005), and the required NA for proper sampling would be 0.43 for a wavelength of 0.000532mm (0.000532/[0.00125] = 0.43). At higher magnification, the specimen will be examined more closely and this also allows a larger number of detector arrays to be utilized by the inspection system.

Please replace the paragraph beginning at page 8, line 29, and ending at page 9, line 12, with the following rewritten paragraph:

-- Typically, to gain the highest sensitivity, the systems are operated with lower wavelengths and higher magnification and sometimes with more than 2.5 detector pixels per resolution element. For example, operating at 100x magnification requires the numerical aperture to be about 0.70 for a wavelength of **0.000365mm** ~~0.000365mn~~, but when operating at

200x will require a numerical aperture of 0.90 at 0.000365mm wavelength, but will over-sample the image with about 4.05 pixels/resolution element. This over-sampling results from not being able to have a numerical aperture larger than 0.90 to control optical aberrations. Generally, the numerical aperture and the magnification of microscope inspection systems increase or decrease proportionally with respect to each other within the range of possible lens solutions. The field of view, however, tends to be inversely proportional to the numerical aperture and the magnification again within the range of possible lens solutions. The lenses of the present invention, however, are capable of obtaining a large field of view while also having a high numerical aperture at high magnification levels. The large field of view, as mentioned above, allows the inspection system to inspect a larger area of the specimen during each scanning swath. To effectively use multiple detector arrays, the field of view of the inspection system is in the range of approximately 0.5mm-3mm. Usually, the field of view is configured to be at least approximately 1.5mm in diameter for all numerical apertures less than 0.90. --

Please replace the paragraph beginning at page 11, line 19, with the following rewritten paragraph:

-- FIGS. 4 and 5 illustrate in a diagrammatic manner how the larger field of view of the present invention encompass more than one detector array. As discussed previously, the ability to place more than one detector array within the field of view allows inspection systems to operate at higher throughput rates. FIG. 4 illustrates a field of view 400 that substantially encompasses eight detector arrays 402. FIG. 5 illustrates a field of view 500 that substantially encompasses four detector arrays 502. The number of detector arrays that can **[[be]]** fit within the field of view depends upon, among various factors, the magnification of the microscope inspection system, the size of the detectors, and the specific lenses used within the inspection system. Generally, more detector arrays can fit within the field of view as the magnification of the system increases. For instance, when comparing FIGS. 4 and 5, the magnification of the inspection system represented in FIG. 4 may be higher than that of FIG. 5 or the detectors of FIG. 4 may be smaller than that of FIG. 5, or a combination of both factors. At the same level of magnification, larger fields of view with a higher number of detector arrays generally increase the throughput rate of an inspection system since more area of the wafers can be inspected during each pass of the detector arrays over the wafers. --